Thesis Title	Design and Analysis for Under Ground Cable System Rating 24-69 kV Using Computer
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ABSTRACT

This thesis proposes the design and analysis of the underground cable distribution system rating 24 – 69 kV by computer. Delphi program was used as a tool to analysis. The program can separate the characteristic which the diameter of XLPE insulating cable such as voltage level, electrical load, the length of installation, temperature, power factor, the height of man hole, co-efficiency of ground resistance, type of duct bank, and so on. After that, the selected sizes of cable have to be investigated for the appropriate tension to pull the cable, side wall pressure, percent conduit fill, jamming and clearance. Also, the characteristic of surge voltage and surge current wave form which take place both direct over head wire and neighbor over head wire influencing underground cable are studied. This is useful for providing lightning surge protection. In addition, the influence of current flow in cable, tension, surge voltage and surge current and so on are displayed in text and graph. These significantly are advantages for the electrical engineers who design the distribution system of underground wire. Furthermore, this can mainly reduce the errors which destroy system and cause higher losses of components, as well as decline the developed time of underground cable installation. Hence, the life of cable is considerably longer.